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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/524,102

02/10/2005

Frederic De Lauzun

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EXAMINER

KARIMI, PEGEMAN

ART UNIT

PAPER NUMBER

2629

MAIL DATE

DELIVERY MODE

08/07/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/524,102	Applicant(s) DE LAUZUN ET AL.	
	Examiner Pegeman Karimi	Art Unit 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) 10-17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 February 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11-1-05, 12-10-05</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Species of Fig. 4, claim 1-9 in the reply filed on 06/26/2007 is acknowledged.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

3. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. The drawings (Figs. 1, 2) are objected to under 37 CFR 1.83(a) because they fail to show labels in the rectangular boxes as described in the specification.

Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing

sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

5. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract

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on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

6. The abstract of the disclosure is objected to because it is not a single paragraph, contains more than 50 words and use the phrase "two embodiments of the display zone are described", which is implied the "The disclosure describes". Correction is required. See MPEP § 608.01(b).

7. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in

upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if

the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Claim Objections

8. Claims 1-9 are objected to because of the following informalities: The use of parentheses in claims 1-9 are improper since parentheses are used only for the reference characters; see MPEP 608.01(M). Appropriate correction is required.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1, 3, and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Negishi (U.S. Patent 5,907,314) in view of Uchida (U.S. Patent 5,877,733).

As to claim 1, Negishi teaches display device (Fig. 4), for aeronautical applications (Fig. 4 is the circuitry of a display device, which can be used for any application including aeronautical), comprising:

an electronic computer controlling a display device (109), said display device being organized as a matrix of N rows of M columns of dots (Fig. 4, rows = X1, X2, ...,

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X_N and columns = Y_1, Y_2, \dots, Y_N , where the pixels are located at the intersection of the nodes)

said computer comprising:

an electronic first assembly for interfacing with the outside (125 receives input video S_{V1} , col. 20, lines 24-27),

an electronic second assembly (124, memory unit) for computing and generating images (memory unit converts video signal S_{V1} to S_{VM} by computing the A/D and D/A based on the CLK signal) and

the display device being structured as two independent display zones (110a and 110b, col. 20, lines 64-66) the electronic second assembly for computing and generating images being structured as two independent electronic subassemblies (Video generator 109 divides the input video signal into upper and lower drive circuits 112 and 113), in such a way that the failure of any one of these various subassemblies entails, at most, the loss of only one of the two display zones (As can be seen in Fig. 11, section 110a is independent from section 110b, section 110a has its own scanning circuit, drive circuit and related signal lines (i.e. C_{HU}, S_{VU}, C_{VU} belong to section 110a and C_{HL}, S_{VL}, C_{VL} belong to section 110b) failure of any of these devices does not have any impact on the other section).

Negishi does not teach the third assembly. Uchida teaches a third assembly for electrical supply (Fig. 1, power supply). Wherein the third, supply assembly is also

structured as two independent electronic subassemblies (2 and 4) in such a way that the failure of anyone of these various subassemblies entails, at most the loss of only one of the two display zones (col. 9, lines 20-25). Therefore it would have been obvious to one of ordinary skilled in the art at the time the invention was made to have added the third assembly of Uchida to the display device of Negishi because shutting off the power supply for the LCD section, which is not driven allows only one of these two sections to be displayed without affecting the electrodes of the non-driven side LCD section (col. 9, lines 22-25).

As to claim 3, Negishi teaches the two display zones (110a and 110b) are geometrically separate, with no common overlap area (Fig. 4, there are no common electrodes between the upper and lower sections, col. 11, lines 33-39 and lines 45-49).

As to claim 4, Negishi teaches for a display device of rectangular shape (10a and 10b), the two display zones are also rectangles of identical shape, the area of each of said rectangles being equal to one half of the total area of the display device (The screen is divided by half, which makes the upper and lower section equal in size, col. 11 lines 34-36).

11. Claims 2, 5, 6, 8, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Negishi (U.S. Patent 5,907,314) in view of Uchida(U.S. Patent 5,877,733) and further in view of Onitsuka (U.S. Patent 5,808,597).

As to claim 2, Negishi teaches the display device is composed of:

a liquid-crystal active matrix (Fig. 11), said active matrix essentially comprising:

a first polarizer (107A);

a first glass plate (103A) that includes at least one transparent counter-electrode (106);

a liquid-crystal layer (105); a second glass plate (103B) having a matrix of control rows and control columns (106),

a switch controlling an elementary electrode being at each intersection of a row with a column (105a);

a second polarizer (107B);

a first electronic driving assembly located around the periphery of the matrix addressing the control rows; and

a second electronic driving assembly (111) located around the periphery of the matrix addressing the control columns, each assembly having of the elementary electrode, of parts of the liquid-crystal layer and of the transparent counter-electrode that are located above said elementary electrode constituting a dot (dot = pixel consisting 520, 521, & 522, col. 19, lines 56-61), the light transmission of each dot depending on the voltages for addressing the control row and the control column of the elementary electrode of said dot (col. 6, lines 44-46 and col. 20, lines 55-63). Negishi

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and Uchida do not mention the fluorescent tubes. Onitsuka teaches a lighting unit composed of aligned fluorescent tubes (13, col. 3, lines 24-26). Therefore it would have been obvious to one of ordinary skilled in the art at the time the invention was made to have added the two subassemblies of fluorescent tubes of Onitsuka to the display device of Negishi as modified by Uchida because when one light source approaches its end of life, only the light source or a block of light sources including the light source is turned off without turning off all the light sources constituting the illumination device (col. 1, lines 50-53).

As to claim 5, Negishi teaches the first electronic assembly (111) for driving the rows of the active matrix comprises two independent subassemblies in such a way that the first subassembly controls the rows of the first zone and the second subassembly controls the rows of the second zone (112 and 113, col. 19, lines 56-61);

Negishi and Uchida do not mention the fluorescent tubes, Onitsuka teaches the fluorescent tubes (13) are controlled by two electronic supply subassemblies (10) each dependent on one of the two electronic supply subassemblies (Fig. 1, col. 2, lines 30-31), the first of said subassemblies supplying the lighting tubes located beneath the first zone of the display device, the second of said subassemblies supplying the lighting tubes located beneath the second zone of the display device (Fig. 1, Upper backlight 13 is located to on the upper side of the LCD screen and the lower backlight 13 is located to the lower side of the LCD screen).

As to claim 6, Negishi teaches the first glass plate of the active matrix (103A) has two independent counter-electrodes (Fig. 11, X_1, X_2, \dots, X_M and $X_{M+1}, X_{M+2}, \dots, X_N$), the first corresponding to the first zone of the display device and the second corresponding to the second zone of said device (X_1, X_2, \dots, X_M belongs to the upper zone and $X_{M+1}, X_{M+2}, \dots, X_N$ electrodes belong to the lower zone), said counter-electrodes being each supplied by the two independent supply subassemblies (115, 116, col. 18, lines 40-42).

As to claim 8, note the discussion of Negishi and Uchida above, Negishi and Uchida do not teach the cutoff function. Onitsuka teaches each of the two electronic subassemblies (10) possesses an electronic cutoff function (11) allowing the supply for the electronic supply subassemblies for the fluorescent tubes to be cut off (col. 2, lines 33-35);

in the event of a failure of any one of the electronic subassemblies or of one of the two display zones, causing the loss of one of said display zones, said electronic cutoff function of the electronic subassembly corresponding to said display zone that has failed is activated in such a way that the fluorescent tubes corresponding to this same, lost display zone are automatically switched off (col. 1, lines 48-54).

As to claim 9, Negishi teaches each of the two electronic subassemblies (115 and 116) possesses an electronic reconfiguration function making it possible to generate only the information essential for flying (115 and 116 receive signal information C_{vu} and C_{vl} These signals can carry any information.), in a format

corresponding to one screen half (Signal C_{vu} is for the upper display and signal C_{vl} is for the bottom display, Fig. 11), in such a way that,

in the event of failure of any one of the electronic subassemblies or of one of the two display zones causing the loss of one of the two display zones, the electronic reconfiguration function of the electronic subassembly corresponding to the display zone that is still functional is activated (Fig. 11, failure of section 115 causes electrodes $X_1 - X_M$ to fail and does not affect electrodes X_{M+1} to X_N because they are fed by a different signal and is going to be activated regardless of failure subassembly 115) .

12. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Negishi (U.S. Patent 5,907,314) in view of Uchida (U.S. Patent 5,877,733) and further in view of Onitsuka (U.S. Patent 5,808,597) and Kubota (U.S. Patent 5,748,165).

As to claim 7, Negishi teaches the first glass plate (103A). Negishi, Uchida, and Onitsuka do not teach a single counter-electrode supplied by the two independent subassemblies. Kubota teaches the active matrix has a single counter-electrode (Fig. 9, GL1) supplied by the two independent supply subassemblies (GD1 and GD2 control the same electrode GL1). Therefore it would have been obvious to one of ordinary skilled in the art at the time the invention was made to have added the single counter-electrode of Kubota to the display device of Negishi as modified by Uchida and Onitsuka because the output voltage range of the scanning line driving circuits GD1 and GD2 becomes

small, and the scanning line driving circuits can be lowered in breakdown voltage, so that it is effective for saving cost (col. 18, lines 29-32).

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kim (U.S. Patent 7,215,311) discloses an LCD and a driving method for charging each data line of the LCD with sufficient data voltage.

Shin (Pub. No. 2002/0130628) discloses a backlight assembly for an LCD.

Flegal (U.S. Patent 4,982,183) discloses an alternative polarity symmetric drive for scanning electrodes in a split-screen AC TFEL display device.

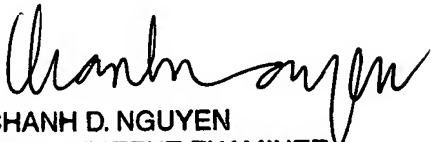
Inquiries

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pegeman Karimi whose telephone number is (571) 270-1712. The examiner can normally be reached on Monday-Thursday 8:00am - 5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chanh Nguyen can be reached on (571) 272-7772. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Pegeman Karimi
07/25/2007


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SUPERVISORY PATENT EXAMINER